

AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): Solder pads for improving reliability of a package, the package comprising a substrate, the solder pads with two sizes of diameters comprising:

a plurality of first solder pads positioned on a surface of the substrate, each of the first solder pads having a first diameter; and

at least a second solder pad positioned on a corner region of the substrate surface, the second solder pad having a second diameter greater than the first diameter to sustain a stronger thermal stress and a stronger fatigue strength.

15

Claim 2 (original): The solder pads of claim 1 wherein the substrate comprises a plastic substrate.

Claim 3 (original): The solder pads of claim 1 wherein the substrate comprises a ceramic substrate.

20

Claim 4 (original): The solder pads of claim 1 wherein the substrate comprises a printed circuit board (PCB).

Claim 5 (original): The solder pads of claim 1 wherein the substrate comprises a chip.

25

Claim 6 (previously presented): The solder pads of claim 1 wherein the corner region comprises a high stress region.

30

Claim 7 (original): The solder pads of claim 1 wherein

the first solder pads are arranged in a matrix at a center region of the substrate.

Claim 8 (canceled)

5

Claim 9 (previously presented): The solder pads of claim 1 wherein the corner region comprises the circumferences of a plurality of concentric circles on the substrate.

10

Claim 10 (original): The solder pads of claim 9 wherein the second solder pads on each of the concentric circle circumferences are arranged with an equal interval.

15

Claim 11 (previously presented): The solder pads of claim 1 wherein the corner region comprises the corners of the substrate on an outside portion of a maximum circle on the substrate.

20

Claim 12 (previously presented): The solder pads of claim 1 wherein the corner region comprises the circumference of a maximum circle on the substrate.

25

Claim 13 (previously presented): The solder pads of claim 1 wherein the corner region comprises at least a grounded solder pad.

30

Claim 14 (original): The solder pads of claim 1 wherein each of the first solder pads and the second solder pad comprise a solder bump pad, the solder bump pad connecting to a solder bump and using the solder bump to connect to a chip.

Claim 15 (original): The solder pads of claim 14 wherein an underfill layer is filled in a gap between the chip and the substrate.

5

Claim 16 (original): The solder pads of claim 1 wherein each of the first solder pads and the second solder pad comprise a solder ball pad, the solder ball pad connecting to a solder ball and using the solder ball to connect to a printed circuit board.

10

Claim 17 (currently amended): Solder pads with two sizes of diameters comprising:

a substrate;

15

a plurality of first solder bump pads positioned on a first surface of the substrate, each of the first solder bump pads having a first diameter;

20

at least a second solder bump pad positioned on a first predetermined region of the first surface, the second solder bump pad having a second diameter greater than the first diameter, each of the first solder bump pads and the second solder bump pad being connected to a solder bump that is connected to a chip;

25

a plurality of first solder ball pads positioned on a second surface of the substrate, each of the first solder ball pads having a third diameter; and

30

at least a second solder ball pad positioned on a second predetermined region of the second surface, the second solder ball pad having a fourth diameter greater than the third diameter, each of the first solder ball pads and the second solder ball pad being connected to a solder ball that is connected to a

printed circuit board.

Claim 18 (original): The solder pads of claim 17 wherein the substrate comprises a plastic substrate.

5

Claim 19 (original): The solder pads of claim 17 wherein the substrate comprises a ceramic substrate.

Claim 20 (original): The solder pads of claim 17 wherein the first predetermined region and the second predetermined region comprise a high stress region.

10

Claim 21 (original): The solder pads of claim 17 wherein the first solder bump pads are arranged in a matrix at a center region of the substrate.

15

Claim 22 (original): The solder pads of claim 17 wherein the first predetermined region comprises the corners on the first surface of the substrate.

20

Claim 23 (original): The solder pads of claim 17 wherein the first predetermined region comprises the circumferences of a plurality of concentric circles on the first surface.

25

Claim 24 (original): The solder pads of claim 23 wherein the second solder bump pads on each of the concentric circle circumferences are arranged with an equal interval.

30

Claim 25 (original): The solder pads of claim 17 wherein the first predetermined region comprises the

corners of the substrate on an outside portion of a maximum circle on the first surface.

Claim 26 (original): The solder pads of claim 17
5 wherein the first predetermined region comprises the circumference of a maximum circle on the first surface.

Claim 27 (canceled)

10 Claim 28 (original): The solder pads of claim 17 wherein the first solder ball pads are arranged in a matrix at a center region of the substrate.

Claim 29 (original): The solder pads of claim 17
15 wherein the second predetermined region comprises the corners on the second surface of the substrate.

Claim 30 (original): The solder pads of claim 17
20 wherein the second predetermined region comprises the circumferences of a plurality of concentric circles on the second surface.

Claim 31 (original): The solder pads of claim 30
25 wherein the second solder ball pads on each of the concentric circle circumferences are arranged with an equal interval.

Claim 32 (original): The solder pads of claim 17
30 wherein the second predetermined region comprises the corners of the substrate on an outside portion of a maximum circle on the second surface.

Claim 33 (original): Th solder pads of claim 17 wherein the second predetermined region comprises the circumference of a maximum circle on the second surface.

5

Claim 34 (canceled)